



COMMUNICATING *Together*

A Quarterly Magazine About Augmentative
and Alternative Communication

Vol. 3, No. 1

March 1985



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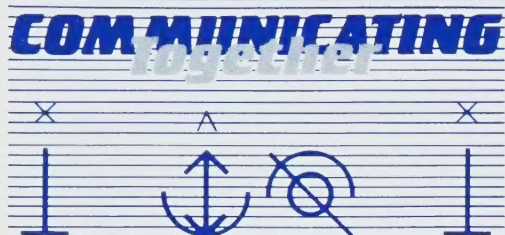
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Vol. 3, No. 1 March 1985

Established November 1982.

Published quarterly by
Blissymbolics Communication
Institute.

Executive Director:
Shirley McNaughton

Editor: Sarah Swartz
Managing Editor: Ann Kennedy
Advertising: Lorne Mitchell
Subscriptions: Lesley Carter

Cover: Justin Clark and Norm
Pellerin outside a beer hall on their
recent trip to Germany.

Blissymbols presented herein have
been electronically typeset. BCI
gratefully acknowledges funding
by the Kiwanis Club of Toronto
to support the typesetting font
development.

BCI wishes to recognise and thank
the following organizations for their
support in sponsoring sections of
Communicating Together.

- Pilot Club International, Ontario District
- Arnold B. Irwin, Kenner Products Canada Ltd., Toronto, Ontario
- Manufacturers Life Insurance Company, Toronto, Ontario
- Sun Life Assurance Company of Canada, Toronto, Ontario
- Tippet Foundation, Toronto, Ontario

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Back Issues: Limited number available,
\$5. Canadian funds.

Subscription Rate: \$20. per year Canadian
funds, \$15. per year U.S. funds. Bulk orders
of 50 units @ \$10. per unit - \$500. Canadian
funds.

Direct correspondence regarding
subscriptions, back issues, contributions,
sponsoring, advertising, address changes and
bulk mailings to:

Communicating Together
Blissymbolics Communication Institute
350 Rumsey Road
Toronto, Ontario, Canada M4G 1R8

Contents	Page
Our Trip to Europe , Justin Clark and Normand Pellerin	4
Blissymbol Talk	6
Perspective	
An Interview with George Karlan, Shirley McNaughton	7
Family and Community	
Great Expectations Fulfilled, Andrew and Mark Murphy	10
Sun Life Helps Again	11
Hamilton Wentworth Library Project, Elizabeth McKinnon	12
Sharing Ideas With Nora , Nora Rothschild	13
Machines, Computers and Things	
Those Wonderful Teaching Machines, Robert Sansone . .	15
International News	
Impressions of ISAAC, Robyn Callaway	16
Teaching and Learning	
It's Wednesday — This Must be Communication Group, Sheela Stuart	17
Blisstube	18
On Peer Interaction, Kim Rae Jolie	18
Research and Publications	
Graphsys: A Graphics Systems Database, Geb Verburg .	20
Augmentative Communication	
Communicating with Speaking-Disabled Students in Mainstream Educational Settings, Linda Hill, Richard Bennet and Donna Pistell	23
Readers Write	25
Schedule of Events	26

Communicating Together is published quarterly as a means of sharing the experiences, systems and techniques of nonspeaking people with their families, communities and the professionals who work with them. Special attention is given to the nonreader's augmentative communication system and the role of Blissymbolics.

The **Blissymbolics Communication Institute** was established in 1975 to facilitate the use of Blissymbolics as a communication system for nonspeaking persons around the world.

BCI Affiliates and Information Centres are situated in

Canada: Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Ontario, Quebec

United States: Alabama, Florida, Massachusetts, Michigan, Minnesota, New York, Ohio, Pennsylvania, South Dakota, Vermont

Outside North America: Argentina, Australia, Belgium, Bermuda, Brazil, Denmark, Finland, France, Guam, Hungary, Iceland, India, Israel, Italy, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland, the Netherlands, the United Kingdom, Venezuela, West Germany, Zimbabwe

Through BCI and its affiliates, over 8,000 instructors have been trained world wide.

Blissymbolics is a meaning-based, augmentative communication system offering vocabulary, structure and strategies to stimulate communication and cognitive development. It can benefit persons of all age and intellectual levels who have the potential and opportunity for interactive, functional communication. Blissymbolics can be used independently, with a variety of picture systems and technologies, or as a complement to words and spelling.

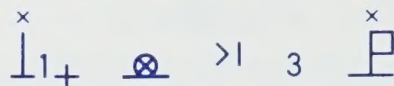
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September 1982, C.K. Bliss granted an exclusive, non-cancellable and perpetual, world-wide license to the Blissymbolics Communication Institute, for the application of Blissymbols, for use by handicapped persons and persons having communication, language and learning difficulties.

The symbol composition and drawings appearing in articles are in accordance with *Blissymbols for Use*, compiled and edited by Barbara Hehner, and published by the Blissymbolics Communication Institute, Toronto, 1980.

BCI is a member of the Canadian Rehabilitation Council for the Disabled (CRCDD).

Our Trip to Europe



by Justin Clark
and Normand Pellerin

Justin Clark has been a Blissymbol user since 1974. Two years ago he moved to Ottawa from Rideau Regional Centre in Smiths Falls. Justin and Normand Pellerin live in a community known as Foyer Portage where Norm is one of the co-founders. Justin and Norm have been close friends for many years.

Once upon a time, a few of us — Germaine, Danielle, D'Allacy, Ursula, Normand and Justin — chose to create an alternative family, a small community home. Danielle and Normand settled in, in August of 1982. Three of us moved out of the big institution in Smiths Falls, Ontario to Ottawa and finally Ursula moved in with us in April 1983.

We lived our day-to-day life of work or school and recreation like everyone else, looking forward to our summer trip to the Maritimes. It was indeed a wonderful holiday, so much so that we kidded around that the following summer we would go farther: Florida, India or Europe. We had our contacts with Ursula's family in Germany and the *l'arche* homes — homes where disabled and nondisabled people live, work, play and pray together. Slowly, the joke became a dream, then a plan, then the reality of a month overseas.

On Friday, June 15, 1984, our friend Paul joined our little group after which we left for Toronto to stay at a friend's place for a couple of nights. Not many people would let seven noisy overexcited individuals float in and out of their home, but Galry is such a friend.

On June 17, 1984, we boarded the plane taking us to Frankfurt. It was easier than we expected. We think that the very clear specifications of the needs of each one of us and a reminder to the airline company two days prior to our departure made a difference to the service we received.

We ate and drank so much on the plane and didn't have to do the dishes. What a life! The sun went down. An hour later it was shining again brightly and our flight came to an end. The doors opened; the chairs were there with many attendants. A few hours, another day, another country, a whole new world.

Arrival in Germany

We were in Frankfurt, Germany. We quickly passed through customs thanks to our attendants. A bright yellow Volkswagon van was waiting for us. Ursula's brother, father and friends had fixed the van creating spaces for people, luggage and wheelchairs. The back seat folded open (like a sofa-bed) so Justin could easily take his brace off and lie down within minutes. Through all the windows, he still saw everything from that reclined position. Ursula's father had built a ramp that made the van and many buildings accessible.

We drove to Dolheim where Ursula's relatives and a home were waiting for us. We went straight to bed and slept most of that day.

The trip was really well planned by Ursula and Vonia, her brother-in-law. On the following Tuesday, Wednesday and Thursday we visited Mainz. This included a rest stop close to the Rhine in Oppenheim and the St. Katherina Cathedral. We ate delicious food, drank much beer and wine, and met other members of Ursula's family and friends. We felt privileged to have so many children to play with and hug, and so many adults to chat with.

The German Bliss display that Anne Warrick gave to Justin helped a lot. We wrote the English word above the German one and when Ursula was not around, we slowly and carefully communicated with the board. There was a lot of laughter when major mistakes were made. Two children and two adults asked for a copy of the display.

Touring France

On Friday, June 22, Normand left for Paris. The rest of us went off to Taizé in France. We stayed at a monastery that is open to the public especially young people. In the summer, they have welcomed up to 10,000 young travellers. It is an open church where Catholics and Protestants pray together. They are renowned for their relaxing and meditative music.

Normand visited friends in Paris and was seen dancing in the streets during Saint John the Baptist celebrations. Afterwards, he joined us in Taizé. Most of us loved the monastery. Danielle even stayed for a few extra days. Normand preferred the surrounding pubs and their local beers.

Already, it was time to go again. We left for a small southern town on the Mediterranean called La Lavendor and set up our tent for six days. Two of us slept in the van, the rest of us in the tent. On the freeways, many restaurants and washrooms were wheelchair accessible. It was interesting to see that many areas of the camping ground were also accessible.

Have you ever bathed in the sun and the sea for six days? Our ladies did, but after three days Paul, Justin and Normand, to conserve their sanity, visited the surrounding cities, the ones on the shore and the others in the mountains. We visited a school, met people, got penpal addresses for friends in Canada and experienced "Spiral Serpent", the roads in the mountains. We ate a lot of ice cream and drank lemonade and beer.

We were pleased, Paul especially so, when we folded the tent and put it away with the rest of the luggage. Little did we know that we were leaving the very warm temperatures of the south to enjoy (ha! ha!) within hours the cold brisk air of the Alps.

We winded our way to the eastern parts of France. Alsace was too



Some of the travellers with their yellow bus.

far for a one-day trip so after supper we rented two rooms along the road. Other than on the plane, it was the only time that we felt like real tourists.

On July 3, we were heading to La Claquelette in Alsace, France. We slipped in and out of Switzerland and in so doing felt international. Within days, we were in three different countries!

The average age of the members of our gang was 30 years, but even so Ursula managed to get us housed in a youth hostel for the next seven days. In the hostel, we were all sleeping in the same room. Have you ever tried to put on record the sounds that seven people make while sleeping? It's special! Justin won the prize in making the weirdest noise, the longest lasting noise and the most noises in the shortest time span. Germaine was not far behind.

We visited a concentration camp in Struthof and it brought close to us the atrocities of war and the possible violence of the human heart. Germaine said that we don't want any more wars or atomic bombs and we all agreed.

That day we received letters from Canada and a phone call from Germany. So many ties! How many friends do seven people have? A hundred plus. How many postcards do they send? Fifty-five at a time multiplied by two or three. That and a few overseas calls made several hundred people participate in our wonderful trip.

Return to Germany

We saw Strasbourg, Colmar with its houses dating from seven hundred years ago. Then, we returned to Germany to a rural area call Bad Tolz close to Munich. We stayed at a cottage and appreciated very much the nature surrounding us; a river, tremendous sunsets, red ants marching, fireflies dancing in the night.

On July 11, we had the most memorable experience of our trip. We climbed the Zugspitze, the highest mountain in Germany (2,966 metres) by train and cable car. We realized after the tickets were bought that Justin's huge chair wouldn't fit in the train. Do we cancel? No, let's make it accessible; take off the Bliss tray, the special footrest, the headrest, the enormous insert and the parts fit in where the whole chair didn't.

It was so hot at the foot of the mountain and we were able to throw snowballs at the top. Incredible! Somebody said it couldn't be done but we did it. We were on top of the world and our eyes, our hearts couldn't stop saying thank you to the God who created this beautiful earth and every one of us.

Finally, we returned to Russelheim close to Frankfurt. Ursula's sister and her family were on holidays and let us use their home for our last days in Europe. A good friend, Johan Spanhove, came all the way from Belgium to visit us there. We visited, ate, drank, shared

dreams with Ursula's family and friends. One has already happened. Her father, 73 years of age, has visited our home in Ottawa.

Other memories lingering are the sight of cats in older churches, first experiences of driving in Europe, stand up toilets, food and drinks. But mostly we remember the accessibility of the hearts and the people we met. We miss them!

A plane flight, a stopover in Toronto and the trip is over. Where do we go from here? Journey inwards, journey outwards — the world is ours to build. □

Two new computer programs developed by the Microcomputer Applications Program of the Hugh MacMillan Medical Centre, Toronto, Ontario

PIC-MAN

- Graphic drawing capability for single-input control users
- Commands displayed in Blissymbols
- Commands can be selected with a single switch or any key on the keyboard
- Spoken commands with a Votrax or Intex Talker speech synthesizer or printing is optional

1 disk + manual

Price in Canada \$50.00 + shipping.

SINGLE-INPUT CONTROL ASSESSMENT

- Aids in assessing a disabled person's potential for using a single-input computer control
- Monitors performance with three computer tasks
- Uses graphic design
- Stores performance data automatically on disk

1 disk + manual

Price in Canada \$60.00 + shipping.

Available in Canada from the Blissymbolics Communication Institute and outside Canada from BCI distributors (see p. 11).

Blissymbol Talk



New Blissymbols for Animals

In August, 1984 the Symbol Committee met for the second time and I'm pleased to announce that the BCI Standard Vocabulary now contains Blissymbols for most animals!

Here are just a few:

dog



animal +
pictograph of tail

cat



animal +
pictograph of claws

horse



animal +
pictograph of
horse's head and
neck

duck



bird + water: an
aquatic bird

Many of these symbols provide information about the animals which they represent. For example:

porpoise, dolphin



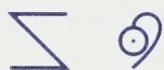
water animal +
smart

ostrich



bird + to walk +
action indicator: a
bird which walks
or runs but does
not fly

Blissymbol News



To get a complete list of all the animal symbols, as well as the other newly approved symbols, please send your request to me care of BCI.

An added bonus will be that your name and address will be put on our mailing list and you will be one of the first to receive all NEW symbols added to the system in the future.

In the next issue we will focus on showing how pictographic features might be added to these symbols in another colour to make them easier to learn for those who need a simplified approach. This concept was developed in the new BCI product *Picture Your Blissymbols* (1984).

Claudia Wood,
Symbol System Coordinator, BCI

New Principles of Usage

BCI has adopted several new principles of usage which encourage symbol users and instructors to create new vocabulary and adapt symbols to meet individual needs. For example, the following principle will allow students to classify animals into groups:

Principle:

An instructor may develop more precise symbol expressions for animals, birds, fish, etc. by adding the following symbols to any standard animal, bird or fish symbol.

protection



can be added to denote a domestic animal, bird or fish. For example:

domestic animal



animal +
protection

domestic bird



bird + protection

domestic dog



dog + protection

open



can be added to denote a wild animal, bird, or fish

wild animal



animal + open

wild bird



bird + open

wild horse



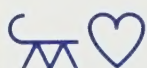
horse + open

feeling



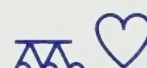
can be added to denote a pet animal, bird, or fish

dog



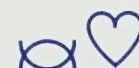
dog + feeling

cat



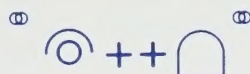
cat + feeling

guppy



fish + feeling

Perspective



An Interview with George Karlan

by Shirley McNaughton

George Karlan is an associate professor of special education at Purdue University. He received a Ph.D. in child development and psychology in 1976 and since that time has been in special education. George is presently co-authoring a book with Lyle Lloyd called Communication Intervention for the Severely Handicapped. The book will be published in the fall/winter of 1985.

Communicating Together:

Let's begin by your telling me what you are hoping to accomplish through your and Lyle Lloyd's book, *Communication Intervention for the Severely Handicapped*?

Mr. Karlan:

In the last five years, there has been a much greater awareness concerning the pragmatics of communication, that is, looking at how one communicates, how language is used, how individuals relate in social interaction. Yet there has been no treatment of the area of communication intervention or communication instruction that brings all those perspectives together, especially one that is focussed on the severely handicapped individual.

The term, "severely handicapped" includes those individuals who have traditionally been labelled moderately, severely and profoundly retarded, as well as some individuals who are autistic, or autistic-like. That's different from the severely physically handicapped individuals who appear to have good cognitive skills, good social skills, good receptive language skills. In the United States we have traditionally called those individuals orthopaedically handicapped or physically handicapped.

In our book, we stress that communication intervention must in-



George Karlan.

clude cognitive skills and social and augmentative communication skills. Children learn about the world of objects, how objects relate together in the environment and how to use them. They learn about the world of people, how to relate to people and how to use people to achieve objectives of their own. This is one of the great lessons of the pragmatic approach to children's pre-language development: that children learn to use adults as tools, to get things done for them, even before they have language.

We wanted to bring augmentative communication into one model, so that augmentative communication didn't exist as a separate set of concerns. We examined how individuals who need augmentative approaches fit into the overall communication intervention program rather than dealing with a specific aid or system which may change many times. Instead of looking at augmentative communication as a product or a device, we looked at the whole process of communication intervention.

Communicating Together:

For how long should communication intervention be undertaken.

Mr. Karlan:

Actually it should never stop. Many of the things that have been written about selecting symbol systems,

have been concerned with initial communication intervention issues. I think this concern for initial intervention was to ensure that the severely handicapped individual — especially one with severe cognitive delays — didn't get passed by. But we should also be looking at what happens after initial intervention. In our book, we are emphasizing the need to enhance early communication skills, and to give attention to those skills which individuals need, in order to become communication partners.

Communicating Together:

Would you describe the model that you present in your book?

Mr. Karlan:

Our model looks at what the person has to say, that is the content or the meaning of the message as one component. Another component of our model is how the person says that message — the expressive/response form that one has available. Finally, the third component stresses the reason to say it.

I think mistakes have been made in traditional behavioural approaches to language training. For example, retarded people were often trained to say sentences that were very linguistic in nature without attention to what the person was going to use the sentence for. As an example, to say "the boy is standing next to the table" is fine, but how often is one called upon to say this specific sentence? In our work we've chosen to emphasize use of the form that the person already has available and to focus upon the purpose for the communication.

Communicating Together:

Would you explain the way in which you described the two prominent approaches to learning — developmental and behavioral — as being terminal points at each end of the spectrum?

Mr. Karlan:

The developmental approach

assumes that the communicatively handicapped individuals, especially the mentally retarded, learn in the same way as the nonhandicapped, but at a slower rate. On the other end, behaviourists say that a severely handicapped individual has a completely different set of skills and skill deficits. I think that reality lies somewhere in the middle. There are some individuals who have lots of inappropriate behaviour and we might wonder what they share in common with the two-year-old language learner. There are others who are similar to the nonhandicapped. If you are a five-year-old severely handicapped child, you probably are more like the normal language learning child than a severely handicapped adult.

I have a lot of trouble with people who tell me that some person "only has a mental age of two-and-a-half". I look at the person and he is 18 years old. He may have a mental age of two-and-a-half but he's not anything like a two-and-a-half year old. He certainly has far more advanced motor skills and he hasn't lived those additional ten years in a vacuum. He has learned some things, and in some cases there are individuals who have learned to be helpless and passive. They haven't been very successful at interacting with their environment or with people, and so they quit. The thing that is important in a developmental approach is the sequence of skills needed before one can go on and learn more advanced things.

Communicating Together:

Would you describe the way in which your model reflects the experience gained through applying both the developmental and behavioural approaches.

Mr. Karlan:

We're trying to understand how severely handicapped individuals learn about the world of objects, the world of people and what they can do communicatively. If we're involved in communication intervention, we also have to be concerned about what sort of conceptual base the individual has. How does he understand objects? How does he understand actions? How

does he understand locations? How does he understand cause-and-effect relationships?

Within the model, we are also concerned with how the person communicates. How does he interact? Does he understand what happens when two people get together? How does he control the behaviour of other persons?

I think that our work is unique because we haven't started from a standpoint of having a set curriculum of language targets. Rather we're looking at how the person behaves socially, conceptually and communicatively and then fitting the communication intervention program to those things.

Communicating Together:

You're asking quite a bit of the system that you described.

Mr. Karlan:

Yes, our approach gets away from looking at systems only in terms of a number of objects that are pictured within the system. It forces us to look at how symbol systems convey ideas like help, giving help, or wanting help or other actions that the individual might want to engage in or things that just are not easily pictured. It's a much harder proposition to picture actions, relations between objects, things being in, on and under, and attributes of things and feelings than it is to just picture objects.

Communicating Together:

I imagine you would advise instructors to look very hard at the system that they choose, knowing that the system must accomplish many things.

Mr. Karlan:

Yes, that's right. In initial communication intervention, you want to maximize people's ability to control their environment through their communication. If the symbols are conventional, it makes the user look more competent. They may also be attended to by others in the environment more easily than they would be if they were using idiosyncratic gestures or vocalizations. That doesn't mean that all gestures or vocalizations should be replaced. But these are augmented for practical

purposes.

Communicating Together:

You're bringing up a very interesting point here, introducing the environment and the person who communicates with the nonspeaking individual. Within your model, how do you deal with the role of the person who is communicating with the nonspeaking person?

Mr. Karlan:

I think there's one important strategy that the listener has to engage in and that's the great PAUSE. Most of the articles that have looked at nonspeakers who have been successfully using communication aids have emphasized the point that the listening audience frequently doesn't have enough patience. Too often the listener jumps in, fills in the gaps, doesn't let the person finish the message.

Some of the studies that have been done with severely retarded individuals and their pre-linguistic communicative ability have shown that if the listener doesn't pause, then the severely handicapped individual doesn't communicate very much. But if there is a pause, then the opportunity for communication is allowed to occur.

Communicating Together:

Could you sum up some of the important factors to be considered in your communication intervention program for the handicapped?

Mr. Karlan:

I would say, first and foremost, that communication occurs in context. And it must be integrated into the context in which it is going to occur. There probably isn't an activity to be taught to a severely handicapped person that doesn't involve communication. Independent living, domestic skills, community mobility, self-care, cooking — there's communication in all those things. Interactive routines

**This section of
Communicating Together
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Toronto, Ontario.**

help not only to set the context for communicating, but interactive routines help people to learn turn-taking skills. That's important in communication.

There are three major areas of communication interaction. Firstly, *dyadic interaction* is what occurs between two people. Sitting down and looking at a book together with a child is an example. The book is an incidental focus for the activity. It's really a time to communicate back and forth about what's in the book.

There are other activities which *do* require us to concentrate on objects. If we're preparing a snack together or we're involved in a vocational task where we have to co-ordinate our activities in order to produce the outcome, we are involved in a *joint action*.

Thirdly, there's the area that is most akin to our ideas of pragmatics and that's *behaviour regulation*. Here, there is an objective. You're not necessarily involved in it, but I may need your help in reaching my objective. It might be

something as simple as "I'm cold". The fact that I'm cold has no particular effect on whatever you might be doing, but I might need your help, especially if I'm a physically handicapped person confined to a wheelchair. So I need to communicate to you that I'm cold for you to help me with a sweater.

This last area is an important one, because it brings up the point of getting attention. We may be very remiss in our communication intervention if we don't pay close attention to whether the handicapped person is able to get the attention of the listener. Or if he can't do that, can he use a call signal to get that person closer and then communicate a message? One can't spell out the message on a communication board when the other person is 25 feet away.

Communicating Together:

Do you think flexibility and expandability of an augmentative system are important considerations for the severely handicapped?

Mr. Karlan:

I think so. We would hope that some of the people that we think are severely handicapped may not be so severely handicapped. Most of us in the field are optimistic and try to use the outlook that we don't know what the upper limits are for an individual. What we've found over the last ten or twelve years is that many of the upper limits that we placed on moderately retarded individuals have been too low. Those limits have now become, in some cases, upper limits for the severely retarded individuals. Maybe as our instructional technology and our augmentative communication technology gets better, we'll find out those upper limits aren't high enough either. I have to keep remembering that we've come a long way since I entered the field in 1969, but there is still much to be learned. □

Editor's Note:

This interview will be continued in a future edition of *Communicating Together*.



THE NONSPEECH TEST

for Receptive/Expressive Language

by **Mary Blake Huer, Ph.D.**

The NST is for:

- nonspeaking children
- multi-handicapped students
- orthopedically impaired children
- mentally retarded

Test Materials Include:

- very durable picture book with 52 color pictures and 12 black and white drawings
- manual including step-by-step directions for administering, scoring, and interpreting the test
- tablet of 50 expressive scoring forms
- tablet of 50 receptive scoring forms
- set of objects
- audio tape explaining in detail the special applications for the test

The NST is a Multipurpose Tool:

FOR:

- diagnosis
- screening
- measuring the success of intervention strategy
- determining expressive and receptive language skill
- selecting a type of communication system
- determining the success of a communication system
- selecting goals and objectives
- determining pre-linguistic communication skill

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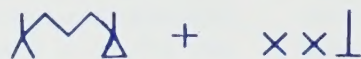
Order The Nonspeech Test by sending a check or organizational purchase order that is payable net 30 days in the amount of \$125.00 plus \$3.50 for shipping. Canadian order must be submitted in U.S. funds and add \$7.00 for shipping.



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Family and Community



Great Expectations are Fulfilled

Andrew and Mark



Andrew Murphy of Toronto has been communicating with Blissymbols for several years. In this column, appearing in each issue, Andrew and his father Mark share their experiences and those of other families with the special perspective of people who communicate in different ways.

November 22 and 23, 1984 were great days for me and many others. I have been using an Apple computer at school for the past few years and have been anxiously waiting to have one at home so that I can work on my own. Eight computers were made available to nonverbal children and schools throughout the province during a two day in-service program at the Hugh Mac-Millan Medical Centre (formerly the Ontario Crippled Children's Centre) on those dates. Ann Running, Carol Sue Menary and I were there to receive our own computers and help our parents learn how to use them. The families and teachers of other users were also there. It was an exciting time. The picture

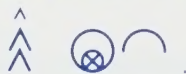
shows the three of us and you can see how happy we are. Ann and I have been friends for many years and now I have a new friend in Carol Sue. We plan to write to each other. This is one of the first messages I printed on the computer at home using the Bliss Apple program.



I got [a] computer last week.



We went [to] OCCC to learn



to work [the] computer.

On behalf of all of us, I would like to thank the Ontario Government through its Assistive Devices Program (ADP) for making these computers available to us. The computers sure will make our lives more enjoyable. I would also like to thank everyone at the Augmentative Communication Service (ACS) for their help in putting the program together and getting it approved. My dad said better not to mention anyone's name because I might miss someone, but you know who you are and thanks to each of you. You have given us something we will use for the rest of our lives.

After we had the computer for a couple of weeks, my mom phoned Ann's mom and Carol Sue's mom to see how they were getting along. Ann's mom said she is absolutely thrilled! She plays games and writes many letters. She uses the computer for two hours at a time and keeps it in the dining room. Carol Sue's mom said that Carol Sue finds that it is fun. It lets her do things all by herself. She works on it for one hour at a time and keeps hers in the bedroom.

Receiving the computer was an early Christmas present. It certainly made Christmas a happier time and

gives us something exciting to look forward to for a peaceful and enjoyable 1985. My dad and I would like to wish that for all of you.

Thanks for reading and don't forget to write.

* * * * *

Nonverbal people elsewhere are also using electronic equipment to communicate. I received a terrific letter from Paula Rae Buskohl of Sioux Falls, South Dakota, who is using an Epson. Here it is:

My name is Paula Rae Buskohl and I am 18 years old. I am a new Epson user. Using the Epson has opened new doors for me since I started using it in June of 1984.

Before I started with Epson, I used a Cannon Communicator which left me almost totally dependent on other people as far as making phone calls and getting other people's attention. I had no way to tell them please come here; I need help.

But it was great for the times when I had to talk to somebody who was right next to me. I always wonder if the people who talk to me felt like they were reading more than they were talking to me, since they had to read everything I had to say.

And then one day Sheela, my speech therapist, came to tell me that I was going to try "Gordy" the Epson. So we went down to have a board made for "Gordy". It took a day for it to be made. When it was done, Sheela came to get me and said, "You may try it until 4:00 p.m." So I did. I loved it!

The only bad thing about the Epson (maybe it is this way with most machines that talk) is that people who don't work with talking communicators on a daily basis can't understand them and then both of you become mad. The user becomes even madder when someone who works with you daily can't understand it. They must listen to it closely enough to understand it. After all, for those of us who use a



Paula Buskhol with her Epson.

communicator of any type, that is our voice. So the people who work with the user need to be patient and willing to try.

It is up to the user to work out a way for the listener to understand it. Some ideas are having the machine say what you want to say again and again, or to record the communicator so the listener can play it back.

Regardless of whether you are the user or the listener, you both have to be very patient with the machine. When you come across someone who has any kind of communicator, take the time to talk to the person using it. Good luck understanding it! □

Editor's Note:

Interested readers please write to Andrew Murphy, 29 Kellythorne Drive, Don Mills, Ontario, Canada M3A 2L5.

**This section of
Communicating Together
is sponsored by
Pilot Club International,
Ontario District.**

Sun Life Helps Again

We are very pleased to announce that the Sun Life Assurance Company of Canada has given the Blissymbolics Communication Institute a two-year grant to support the publication and distribution of *Communicating Together*.

Over the past two years, Sun Life has helped *Communicating Together* in several ways. It has sponsored the "Machines, Computers and Things" section and has provided funding that allowed us to offer complimentary subscriptions of *Communicating Together* to libraries recommended by our readers.

Now, with increased and major funding support, we will be able to extend the size and quality of *Communicating Together* to serve better the needs of its readers. This issue has been enlarged to 28 pages. In future, we hope to include broader content and improved illustrations and graphics. Believing as we do that a broad relationship will increase community understanding, we plan as well to undertake extensive promotion to increase the number of subscribers.

We particularly wish to reach libraries, professionals and community organizations and to create a greater awareness of the help to be found through augmentative communication systems and devices. As opportunities for integration increase for nonspeaking

people, it becomes ever more vital that they and those who associate with them learn about the many ways to facilitate their communication.

With Sun Life's help, we look forward to communicating with more people and to helping more people communicate! We ask you to help by approaching the public library in your community. Visit your library and tell them of the complimentary subscription made possible to them through Sun Life's generous grant. The enclosed form, when completed and returned to us, will qualify your public library for a one-year subscription. Your library needs to know that you want *Communicating Together* to be available in your community. Please mail or take the Sun Life gift form to your library right away. We will enjoy sending them their first copy of *Communicating Together*.

We will be reviewing subscription rates as *Communicating Together* becomes more widely circulated, in the hope that in 1986 the Sun Life funding can be partially directed toward reduced Canadian subscription rates.

Sun Life has given us their help. Now we ask for yours! Let's make 1985 and 1986 the Sun Life Years and move as close as we can to achieving our objective of reaching all the communities of nonspeaking people.

Our sincere thanks to Sun Life Assurance Company of Canada! □

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Hamilton Wentworth Library Project

by Elizabeth MacKinnon

Elizabeth MacKinnon, a speech-language pathologist is currently employed as a specialist in augmentative communication systems at the Cerebral Palsy Centre, Chedoke Division of Chedoke-McMaster Hospitals, Hamilton, Ontario. She has been actively involved with the Hamilton-Wentworth Communication Collective, an advocacy group for communicatively impaired individuals, for the past two years.

In the spring of 1979, staff from the Hamilton Public Library frequently visited the classrooms at the Cerebral Palsy Centre in Hamilton, Ontario to acquaint the children at the Centre with materials and books available from the public library. Many of these children used Blissymbols to communicate. The library staff became interested in this graphic means of communi-

cation. They were not aware of any books available for the children to read using Blissymbols and felt they were needed. The staff consequently applied for a government grant to purchase library books for translation into Blissymbols.

Once the grant was approved, the library staff selected 46 library books for review by the centre staff. Three individuals, Barbara Rush, Shelley Deegan, and Sandra Dodgson, undertook the task of translating the books into Blissymbols. Three levels of translation were done for each book: label, paraphrase and literal. This meant there were books available to meet the needs of children at different ages and different symbol usage levels. The labelling version was directed towards children just learning to use Blissymbols while the paraphrase version was for those children who were beginning to understand sentences. Literal translations were designed for those children who were moving from the use of Blissymbols into traditional orthography. This meant that although there were 46 books sel-

ected, over 120 versions had to be completed.

Before beginning the project, library staff informed the publishers of the selected books about their translation into Blissymbols. None of the publishers expressed any concerns about the project. Once the translations were completed, they were sent to the Blissymbolics Communication Institute for review, revision and approval. The translation phase of the project took about 18 months to complete. The translators met once or twice a week, then completed the books on their own time as volunteers. The translation phase of the project continued into the spring of 1981.

During this time, the Hamilton-Wentworth Communication Collective became established. This group was organized to act as an advocacy group for communicatively handicapped individuals within the Hamilton-Wentworth area. As one of its projects, it assumed responsibility for continuing the translations.

The next phase of the project involved transcribing or drawing the Blissymbols translations into the

Three Levels of Blissymbols Translation

We made a snowman.

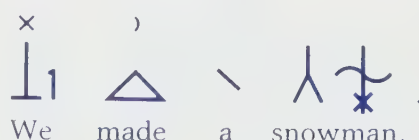
Label:



Paraphrase



Literal:



From *The Snow* by John Burningham.
Reproduced by permission of the author and Jonathon Cape Ltd.

books. Every second Monday of the month was designated as a library transcription night. All members of the Collective who had some symbol experience were encouraged to attend. Other members were sought to do non-symbol related tasks such as "Mactacing" and printing. These meetings became social occasions where members could meet and exchange information in a fun but productive forum.

Initially all symbols were drawn into the books by hand, using templates. But with the availability of an Apple II+ computer and a copy of the Talking Blissapple program at the Cerebral Palsy Center in 1983, many of the translations were transcribed using the computer. Kelly Coe, a student from Hill Park Secondary School and a member of the Collective, did most of the computer transcriptions as part of a work experience project. Sometimes the quality of print, combined symbols and gloss changes posed problems but generally the use of the computer sped up the transcription phase immensely.

As books were completed, they were sent to the public library to be included in the Special Needs Collection. This made them available to children throughout the Hamilton-Wentworth region. As well, copies of the books were made available at the Cerebral Palsy Centre.

At one time, the project was expected to be completed within a year. Without the computer, it might still be going on. As a matter of interest, a gross approximation was made that the project had required 500 to 600 volunteer hours.

As for future plans, the Hamilton Library has asked the Collective to consider doing more book translations. Discussions are underway with the Blissymbolics Communication Institute regarding the feasibility of cooperating on future translations. It is possible that the text translations could be typeset with the new Blissymbol font (see *Communicating Together* Vol. 2, No. 4) ready for insertion into the books. This way other groups like the Hamilton Wentworth Collective could purchase the books, apply the translations and make them available to their local libraries. □

Sharing Ideas with Nora

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Dear Readers:

I would like to share a simple thought with you: "Let us not forget the original goal." As I see it, the original goal of introducing any augmentative system is to allow the user to communicate as immediately, functionally and effectively as possible.

Especially in a field that is new and growing so quickly, it is often difficult for instructors to learn, integrate and implement ideas appropriately. We often get so caught up with the systems, materials and ideas that we lose sight of our original intent. As a result, there are many nonspeaking users who are provided with a variety of augmentative communication systems, which they are unable to use in a functional way. I have seen many individuals who are effective augmentative communication users. When asked a simple question such as "What would you like to do now?" they would simply answer "paint". They have used an inherently slow system as efficiently and naturally as they can. Yet it is this type of user who is usually asked by the well-meaning instructor to "Say the whole thing please" or "Use a sentence please". In many cases I believe that the instructor has forgotten the original intent of providing an augmentative communication system.

As another example, I have seen augmentative communication users who are able to locate and use vocabulary when it comes up in a meaningful way. It is common to find these same individuals provided with matching drills for vocabulary which is already used effectively. In some cases this may be due to a lack of knowledge on the instructor's part of what to do next. However in many cases, the next step would be more obvious if the original intent was kept in mind.

As yet another example, I have seen many Blissymbol users who are able to use the system to communicate abstract concepts, which cannot be represented by pictures, sequence simple stories and create new ideas by combining symbols. These users are often introduced to complex symbols representing food, clothing and other concrete items which require weeks or months of drills and training to learn. These same individuals are often able to use pictures of concrete objects immediately following a simple introduction. If our intent is to have these individuals communicating effectively, then in some cases it may be possible to mix pictures with Blissymbols if it does not interfere with the system as a whole.

As a final example, I have seen individuals who have intricate coding and accessing systems which allow them to physically access their system. Often, however, little thought is given to issues such as vocabulary selection and training effective interaction skills. By forgetting the original goal, the system has little value.

If you agree with the basic premise of this article, please take time to share some of your anecdotes. If you do not agree with these ideas, please write so that others may learn from your experience.

Nora Rothschild, ACS consultant.

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Machines, Computers and Things



Those Wonderful Teaching Machines

by Robert Sansone

Robert Sansone is the Executive Director of the Association for the Help of Retarded Children, Suffolk Chapter, in Bohemia, New York. He is also Editor-in-Chief of its Newsletter Lamp-lighter. The following is taken from an article written by Mr. Sansone for the August/September 1984 issue, Vol. 15, No. 3. It is reproduced here with his permission.

In the relatively short history of special education for the moderate-severe and multiple handicapped retarded, the application of micro-technology has been the most dramatically successful development. In my view, we are witnessing a true pedagogical breakthrough in reaching many of these very seriously handicapped people. Through the use of computers and the array of learning software which is rapidly becoming available, we are beginning to tap cognitive and motor function never dreamed to be accessible in these people.

One important basic feature of this form of programming is that the software can be geared to almost any mental age level. These pre-programmed discs are available with learning activities at the pre-school level, down to about mental age two or three. It is now suspected that we may be able to tap even more basic areas of psychosocial integration and attention-span through the use of single switch adaptors, eliminating the need for some of our clients to use the machine's keyboard. By way of a single touch of a person's palm, finger or head pointer, a pre-programmed response is produced on a colour monitor or T.V. screen. These "ability switches", as they are called, come in a wide variety. Some are activated, and put a learning goal and response in motion, by squeezing a small rubber bulb.

Others are activated by sound or a client's voice, others through the client's puffing or sipping, and still others through myoelectrical signals from contracting muscles, literally, by raising one's eyebrow.

Software

As to mental age appropriate software, clients have colourful motor-visual access to activities such as number identification, counting, basic addition, subtraction, matching of letters, seeing and learning the alphabet, comparing shapes and even typing their names. These activities are programmed by one such commercial organization called Counterpoint Software, Inc. A company called Weekly Reader Family Software puts out software dealing with spatial relationships, shape identification, number identification and matching. Spinnaker Software Corporation has a disc called "Face-maker", which teaches body parts, creates client body orientation and inculcates visual memory. Concerning colour identification, size and shape discrimination, directionality, letter matching and left to right orientation, Koala Technologies Corporation has come out with excellent software for the moderate and severely retarded. Many of the learning goals in Koala's computer software offerings are, by the way, important pre-reading and functional reading foundation builders. For purposes of cultural survival, our environment is overlaid with comfort-providing and life-saving directional signs and symbols which most of our retarded should be taught to read and interpret for their own welfare and dignity.

Another computerized teaching innovation from Koala Corporation is the "Koala Pad". This is a small flat tablet-like device which can be easily handheld or placed on a desk top. Pressing against the surface of this fascinating electronic pad with a pencil-like stylus, the client's drawings and doodle impressions are transferred in pre-selected color modes to the T.V.

screen. Aside from artistic outcomes, this sort of device appears to be quite significant for the development of visual-motor organization as well as the nurturing of individual concentrative effort. The graphically impressive and sensory compelling T.V. monitor display of the client's effort acts as the ultimate reward in this learning experience.

A significant development with these small computers is that with special programming they can talk to and for a client. Through a process known as encoding or a text-to-speech process, the computer can produce synthesized speech responses to the client and, through relatively simple computer key manipulation, express in electronic speech a nonverbal client's needs. This has been made possible with the Apple II and similar personal computers on the market. All of these machines can be made to produce electronic speech with only minor adaptations using in most cases small, easily insertable prefabricated circuitry boards known as "serial cards".

A recent advance has been the development of even smaller and completely portable computer language devices. These can be easily carried by clients wherever they go. With one model called "Speech-pack", the nonverbal client's teacher simply keys a custom vocabulary into the portable computer's memory using a letter code that is easy for the client to remember. For example, the client enters "DW" and pushes the return key. The Speechpack then speaks, "I want a drink of water." In another model designed for lower functioning clients, the key is an actual

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picture of a glass of water which represents "water" or says the entire sentence, "I want a glass of water." Some of these devices give the user the opportunity of entering up to 3,000 units of communicative information.

An Argument for Computers

Getting back to micro-technology and special education, I feel that all day programs should have computers. Computers should be available when workshops are slow. All speech and hearing departments should have computers as a therapeutic adjunct in language development and communication. Even occupational therapy programs should be using computers for purposes of visual-motor integration and to reach goals related to task completion. Above all, day treatment clients suggest that some could probably profit the most from this instructional approach.

Contrary to what some people think, personal computers are not all that expensive and they will probably be getting cheaper as the technology continues to develop. A good personal computer can be purchased for under \$2,000 if one is selective with the hardware, that is the mechanical accessories. For example, learning programs do not necessarily require a printer. A printer adds substantially to the cost. Software is quite inexpensive, programmed discs being in the \$35 range. Sometimes best quality learning software is placed on sale by some distributors for under \$20 a program.

Finally, I strongly feel that where appropriate and meaningful for the client (and the client's family), every home with a moderate-severe handicapped child or adult should be given the opportunity to own one of these personal computers to serve as a programmatic bridge between the school, day program or whatever activity the individual attends during the day away from home. Federal legislation should be introduced and passed to reimburse families for the expense, based upon a certified professional statement that such equipment would be of value in adding to the client's growth and development. □

International News



Impressions of ISAAC

by Robyn Callaway



Robyn Callaway has been a teacher of early childhood education for 14 years. She is presently the Blissymbolic Coordinator at the Hartley Street Centre, Canberra, Australia.

I was awarded a study grant by the A.C.T. Schools Authority, Canberra, Australia to observe and participate in Blissymbolics Programs within North America between October and December 1984. I participated in the internship program at the Augmentative Communication Service at the Hugh MacMillan Medical Centre (formerly Ontario Crippled Children's Centre) and attended the ISAAC conference in Boston, Massachusetts.

After spending a very valuable two weeks in Orlando, Florida with Sandra Osborn at the Crippled Children Society and then at the Blissymbolic Resource Centre at the New York Association for the Help of Retarded Children, Bohemia, New York, I was looking forward to a relaxing two day break in Boston before the conference commenced. This did not materialize since I was swept along by my own great enthusiasm which I gained from a diverse group of people with common interests from all over the world. Consequently I was nominated as Membership Liaison person for ISAAC in Australia. I gained hands-on experience at the confer-

ence by taking a turn behind the ISAAC membership desk.

I found it very difficult to cover the whole conference effectively. Being one person representing a very diverse group of people back in Australia, I had great difficulty in choosing which sessions to attend from the many excellent sessions that were held concurrently.

One session that I valued was that on Prerequisites to Augmentative Communication presented by staff at the University of North Carolina. They stressed from their experience in working with non-vocal clients the importance of prerequisite skills. Unless these skills are present, a device or system will not be successful. The team suggested that procedures for developing readiness for an augmentative communication system be organized in a systematic manner.

In total, the conference was a marvellous experience for me. I enjoyed establishing contacts with people who are involved in the field of Augmentative Communication. I strongly feel that ISAAC is a vital international link to keep abreast of the rapidly changing and exciting field of Augmentative Communication and will be looking forward to attending the conference in Cardiff, Wales in 1986. □

* * * * *

Abstracts of Nonspeech Conference Available

A number of abstracts from the Nonspeech Conference in Boston, October 17-19 are still available. Those interested in purchasing a copy please write:
ISAAC, P.O. Box 1762, Station R,
Toronto, Ontario, Canada M4G 4A3.

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Teaching and Learning



It's Wednesday — This Must be Communication Group!

by Sheela Stuart

Sheela Stuart is Supervisor of the Speech Language Therapy Department at the Crippled Children's Hospital and School in Sioux Falls, South Dakota. She is involved with the NACE Center (Nonverbal Augmentative Communication Evaluation Center), a unit established by the Crippled Children's Hospital and School. Mrs. Stuart is also a Senior Presenter and affiliate of BCI.



Members of the Communication Group.

Down the stairs, through the gray corridor, faster, faster. I'm late; they're waiting. The sounds of wheels on the tile, electric wheelchair motors and unintelligible vocalizations present themselves, as I come closer. At last, I round the corner, go into the Dorm Commons and there sit 22 kids. It's nine o'clock on Wednesday morning and that means they are here for Communication Group.

In a group like this, the mechanical devices nearly seem overwhelming. So many wheelchairs, eye-gaze boards with different symbols, pictures, colours. There are three Express III devices, two Sharp Memowriters, two Canons, two Epsoms, two Handivoices, booklets, laptray Blissboards, on and on. But above all, there are faces looking at you expectantly. Kid faces, with freckles and scratches, runny noses and drool, smiles and seeking eyes.

Ours is a hospital/school for kids with handicaps. Sixty of our present 120 population have nonverbal as a handicapping condition. Therefore, we have pursued all the avenues of augmentative communication that we can find to fit individual needs. But individual communication eventually needs group interaction. Thus, the weekly get-together came to be.

Last Wednesday, we asked them, "Why do we come here? What is our purpose in this group? What do you like or dislike about this Wednesday Communication Group?" They answered as follows.

Travis (nine years old, athetoid cerebral palsy, using Express II): "My machine helps me write letters. I have fun playing games in Communication Group."

Eric (11 years old, athetoid cerebral palsy, using wordboard): "I have fun being around kids. It helps me use my board better with other kids."

Rochelle (9 years old, athetoid cerebral palsy, using Express III): "I like making friends here. I like to do writing. I can't write, but Sarah June can."

Paula B. (18 years old, athetoid cerebral palsy, using a Canon Communicator): "I would like to write. Maybe this group will help me to make sentences better."

Jason S. (eight years old, spastic cerebral palsy, using Express III): "You help me use Blissymbols. I feel good about Communication Group."

Sam Flute (10 years old, spastic cerebral palsy, using Express III): "It helps me use my machine and board good."

Ryan P. (six years old, spastic cerebral palsy, using Bliss Booklet):

"I feel angry at Communication Group. I want to be in gym playing with class." (Now we understand part of the reason why he always acted up during Group.)

We also asked what some of the favourite activities had been. Reading the answers was like instant flash-backs. Hours of hot, smelly bus rides when we went on outings. Scary ventures into making long distance telephone calls, where one prayed the device had the preprogrammed answer to the question asked at the other end. Scenes from shopping trips where kids acted so appropriately. Interactions at a third grade public school where kids acted so inappropriately. Writing a "play" together and then videotaping it.

Suddenly, it's ten o'clock. Time to go to the next daily event. Six therapists, 22 kids: "Goodbye, goodbye." "I go to swimming." "Put this in my backpack, please."

**This section of
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Canada Ltd.,
Toronto, Ontario.**

Next year's goals for this project include:

- More telephone calls using augmentative devices.
- More pairing of high level communicators with low level communicators for modeling, teaching and motivation.
- Expansion of a growing identity. We are "special communicators". Let us share with you. □

Editor's Note:

Recently, the NACE Center produced an interesting videotape called *To Be Like Anyone Else*. This 30 minute film gives a general introduction to the field of augmentative communication and focusses on technology and synthetic speech devices used at NACE. The children are shown in a variety of activities, using their communication devices.

For further information regarding this film, contact: Mrs. Sheela Stuart, NACE Center, Speech Language and Hearing Department, Crippled Children's Hospital and School, 2501 W. 26th Street, Sioux Falls, South Dakota, 57105 U.S.A.

* * * * *

BLISSTUBE

A fun way to acquaint peers of young Blissymbol users with the system of Blissymbolics. Developed for *Free Stuff for Kids**, the Blisstube contains:

- a Blissymbol button
- a *Communicate Together* poster
- a Blissymbol display
- a crossword puzzle
- a short explanation of Blissymbols

Collecting or earning the \$1.25 (This is all it costs!) and ordering and waiting for the arrival of Blisstube can add to the interest in learning about this special way of communicating. Try duplicating the materials for the enjoyment of a school camp or Guide/Scout group or for family friends.

And there is lots of other "stuff" all costing under \$1.50 to be discovered in *Free Stuff for Kids*.

Young people wanting a Blisstube of their own should send \$1.50 to: Bliss/Tube, Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario, Canada M4G 1R8

On Peer Interaction

by Kim Rae Jolie

Kim Rae Jolie is the Coordinator of the Augmentative Communication Program at Children's Specialized Hospital in Westfield-Mountainside, New Jersey. She has worked with non-speaking individuals since the mid-1970's. Her special areas of interest include facilitation of peer interaction among nonspeaking clients, and using advanced technology to increase their overall independence. Much of the information in this article was presented at the Third International Conference on Augmentative and Alternative Communication in Boston, October 1984.

In recent issues of *Communicating Together*, Andrea Blau (Vol. 1, No. 4) and Janice Light (Vol. 2, No. 1) have emphasized the need for non-speaking individuals to establish effective interaction skills. Much of the literature has focussed on the communication skills of augmentative communication system users with speaking, and often non-handicapped partners. However, speech/language clinicians/facilitators need to look beyond the scope of this dyad. Indeed, many nonspeaking people look forward to interacting with both their speaking and non-speaking handicapped peers.

In normal social development youngsters continually increase their independence. There is a set detachment process from parents/authorities over time with peer attachments becoming prevalent. It seems that nonspeaking children are too interested in interacting with their peers, particularly as they reach adolescence. However, the spontaneous occurrence of sophisticated interaction is often impeded by the extremely individualized and varied systems they use. This individuality seems to have enhanced their communication abilities with speaking adults but may preclude easy interaction with their speaking and nonspeaking peers. Intervention goals should focus on altering systems or parts of them to encourage these types of varied interactions.

Facilitating Individual Responsibility for Communicative Competence

Peer interaction is best facilitated when each individual is able to communicate to his/her potential. Individual training sessions can be used to implement the following goals that will enhance that non-speaking individual's participation in relationships and groups.

(1) The nonspeaker must accept responsibility for his/her communicative competence. She/he needs to read a partner's clues of misunderstanding and take a share of the responsibility for repairing communication breakdown. For example the facilitator could structure the following types of situations to help the nonspeaker read the partner's clues of misunderstanding.

- Set up interviews with people the nonspeaker knows well, then someone he/she knows casually and finally with someone unknown to the nonspeaker. Have both the natural speaker and nonspeaker answer identical questionnaires in an effort to define where each party saw problems with or assets of the conversation. By studying these with the nonspeaker, future communicative exchanges can be enhanced.
- Video tape recordings of conversation between aided communicators and natural speakers to provide feedback to the instructor and nonspeaker about problems that cause communication breakdown.

(2) The aid user needs to become adaptable. Some spontaneous alteration of input or output mode may be needed from time to time. For example, focussing on the times when speech output is most appropriate or when hard copy print-out is best is helpful to discuss with augmentative system users. This ensures that the transmission of messages is done most effectively and appropriately to a given situation.

(3) The aided communicator needs to be aware of the balance necessary in interaction this includes balance of conversational participation, balance of responsibility for communicative success, balance of

*Barbara Hehner, ed., *Free Stuff for Kids*. Toronto: Stoddart, 1984.

initiation and response, etc. Role playing can be a valuable training tool in structuring situations for practicing strategies such as asking questions and taking turns.

(4) Nonspeaking individuals need to become adept at negotiating the rules of conversation for different situations. They need to encourage teamwork with each possible partner for successful interaction. A student needs to be shown how to instruct natural speakers in the techniques necessary for successful interaction with his or her individual communication system. For example, a nonspeaker might have a continuous loop cassette recording that can be played at the beginning of a conversation to explain how a particular individual communication system works.

Facilitation of Peer Interaction

Facilitators must look at those with whom the nonspeaking people will want or need to interact. It appears that certain nonspeaking individuals will gravitate to others with similar social, cognitive or motor skills. In some cases, they may simply share common interests. Whatever the case, groups of two partners may then be scheduled for specific training in communicative interaction.

The possible peer partners for aided communicators may be handicapped or nonhandicapped persons either speaking or nonspeaking. Where at least one individual utilizes an augmentative system, it may or may not be possible for the natural speaker to interpret the message. There are many possible combinations of conversational situations or dyads that could develop, from a nonspeaker and a speaking physically handicapped person through to two nonspeakers.

Each situation needs to be looked at separately to pinpoint areas requiring the most concentration. The overall goal of the facilitator is to set up a situation that allows the two peers to communicate independently without a mediator/interpreter. The facilitator can help accomplish this in several ways.

(1) Encourage the interactants in

all the situations to accept mutual responsibility for the balance of the interaction.

(2) Assist the nonspeaker in teaching the natural speakers in the various dyads the specific system(s) used by the nonspeaker. Natural speakers are often enthusiastic about doing so.

(3) Provide the nonspeakers with appropriate vocabulary for quick setting of conversational rules. Messages such as "This machine talks and writes. I use it when people don't understand my talking. Please be patient and I will teach you." can be programmed into devices and can be quickly accessed to encourage participation and patience on the part of the speaker.

(4) Encourage the partners to be aware of aspects of interaction that enhance or impede communication. Lack of eye contact and inappropriate spacing between partners are some examples of factors that can interfere with effective communication. These can be pointed out and corrected to enhance interaction.

(5) Facilitate the communication between two peers with incompatible communication systems by altering the augmentative communication system when necessary. At times, it is necessary to utilize one of the systems as a "pivot" or "common" system that both partners use during interaction. For example, a direct selection communication board user and a partner who uses an encoding system can communicate together using the encoded communication board as the common board. This requires flexibility on the part of both users but is often successful following training.

(6) Alter the environment to provide communication for these partners in all environments. Making communication systems accessible in all situations is crucial to the development of sophisticated peer relationships. For example, common communication boards can be fabricated for use in the swimming pool, in the playground area, in the dining room, etc.

(7) Provide general communication training by encouraging dyad members to interact directly with each other rather than relying on the facilitator as interpreter. For example if the facilitator stands behind the participants and provides assistance by accessing the system using the nonspeaker's finger, it is more likely the two peers will communicate together rather than creating a triangle with the instructor. Remember the facilitator should not become a mediator. The purpose of the training session is to teach the peers to communicate.

Finding ways of allowing the nonspeaker to interact with larger peer groups should also be considered. Measures such as illumination of one or more manual communication boards via an overhead projector or use of various speech output devices are possible to accomplish this. In addition, therapeutic intervention with these groups focussing on appropriate interaction styles is helpful in order to build communities based on strong peer relationships.

The Assistance of Technology

The recent increase in telecommunications capabilities can also be used to expand the nonspeaker's communication with other nonspeaking peers. Modems can be used to provide communication networks of nonspeaking computer users via the phone lines. The development of user directories will assist these individuals to establish peer relationships at a distance.

With the increase in sophisticated technology, the improvement of speech capabilities in electronic communication devices should have significant impact on the development of interactional skills in nonspeaking people. It is conceivable that synthetic speech similar to human voice in speed and quality will be developed, increasing the ease with which peer relationships among nonspeaking people can be attained. □

Research and Publications



Graphsys: A Graphics Systems Database

by Geb Verburg



"Research and Publications" is written by Geb Verburg, who has been involved in the field of non-speech communication since the mid-seventies. A cognitive scientist, Mr. Verburg is currently working as Research Associate in several research projects at the Hugh MacMillan Medical Centre (formerly the Ontario Crippled Children's Centre) investigating the use of microcomputers, the development of software and assessment tools for control and mobility.

In the previous issue, I discussed methods of comparing graphic communication systems. I mentioned that a database had been constructed using dBase II on the Apple II computer. I would like to present in some detail the fields and rating categories that we have chosen and/or are still deliberating. The two purposes of this article are (1) to acquaint you with our effort and (2) to solicit your critique and comments. As I mentioned in the previous issue, the initial outcomes were presented and enthusiastically received at ISAAC's Third Nonspeech Conference.

What is a Database and What Can it Do?

A database is a body of information stored in a computer. There are many different types of databases. The simplest ones are mailing or address lists. More complex databases can store knowledge and information to aid in decision processes such as medical diagnosis, or to simulate economic, political or corporate systems.

Graphsys is the name we have given to our graphics system database that contains the names (meanings) of all the symbols in eight commercially available graphic communication systems or picture sets. These are: Blissymbols (BCI), Core Picture Vocabulary (Johnston), Oakland Picture Dictionary (Kirstein), Picsym (Carlson), PIC (Maharaj), PCS (Mayer Johnston), Picture Your Blissymbols (BCI), Worldsign (Orcutt). More systems can be added and we hope to continue to extend the base. Just as a mailing list contains more than just names, so Graphsys stores other information about the pictures and symbols. This information is organized within "fields" that cover grammatical information (i.e. parts of speech, words or phrases) about the pictorial representation, and about what, for lack of a better term, we have called categories relating to usage of the language.

We have tried to select ratings and classifications that are clear and unambiguous, or alternatively ones for which clear, unambiguous and comprehensive classification/rating instructions and examples could be provided. We find, and you will probably agree, that we have succeeded for some but that for others improvement is needed. We have also tried to select fields that contain information that is relevant to clinical applications and decisions on the one hand and/or information that has a basis in cognitive developmental, augmentative communication and visual perceptual research on the other. To this end, we have sought consultation from

practitioners and researchers and we would like to express our thanks for their contributions.

The purpose of investing much time and effort in the selection of the data entry fields is that we want to make sure that the information drawn from the base is useful for different people and purposes. We want the base to be able to answer questions from augmentative communication clinicians who need to know the number and type of symbols, the ways in which action words are symbolized, the complexity of the graphic representations and the range of topics that can be expressed.

Secondly, we want the base to be useful for the authors and designers of augmentative communication systems and picture sets who may want to use the base to extend or modify their systems. And finally, we would like to see the base used by researchers not only to analyse and compare systems but to systematically study the many factors that affect symbol communication.

Fields Included in the Data Base

- *Names of the Symbol:* Here we enter every word that is printed with the symbol.
- *Part of Speech.* We list the part or parts of speech of the words that are associated with the symbol.
- *Phrase.* We note whether a symbol expresses a phrase and we categorize phrases as one of the following:
 - no phrase
 - greeting or parting
 - request or message for information or attention
 - request for or message about object, person, place or event
 - request for help
 - rejection/refusal
 - politesse, formal politeness
 - different, none of the above
- *Word Only.* This field records when no graphic symbol or picture appears on the card, but only a word or orthographic characters.
- *Multiple Symbols.* Some systems have more than one representa-

tion (on different cards) for a word.

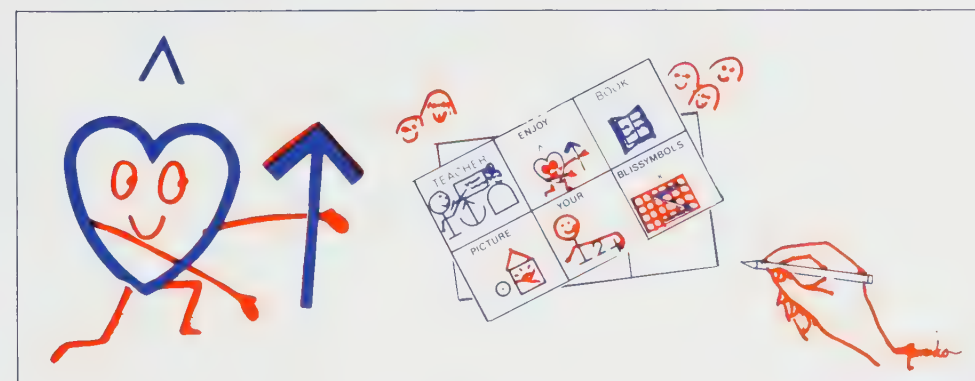
- **Multiple Words and Multiple Concepts.** In some systems, two concepts are represented and printed on a single card.

Fields that Describe the Graphics

- **Agent/Recipient.** We were interested in seeing how many symbols and systems used human agents or recipients or both to represent meanings.
- **Complexity.** Here we count the number of distinct, identifiable inanimate objects in the picture. This together with a count of humans and animals gives us an impression of how many different things are represented in a single picture and thus conveys one aspect of complexity.
- **Movement.** In order to record how movement was represented, we created the following categories: no movement, multiple images, imbalanced (frozen) postures, movement lines and arrows to indicate movement.
- **Emphasis.** This field indicates whether the symbol uses arrows, pointers, rays, shading, circles or colour to indicate and emphasize a particular part, component, location or element of the picture.
- **Set/Collections.** Some systems use, on one card, multiple examples of the object symbolized. For example several different candies and a lollipop for "candy", an open and closed book for "book".

Fields that Require Refinement

- **Detail.** This field codes the graphic representation as either detailed or simple.
- **Typicality.** The origin of this field can be found in Eleanor Rosch's research on prototypicality which has shown that people appear to structure their knowledge in such a way that if one asks 100 people to mention the name of a bird a large proportion of people will mention the same name (e.g. robin). A robin is therefore a more typical bird than a penguin or ostrich. We felt that a similar prototypicality might exist in graphic representations and, if so, then it



An instructional approach to the teaching of Blissymbols for those whose developing communication needs require that the symbols be simplified.

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would be worthwhile to evaluate pictures and symbols as to their typicality.

Semantic Function and Categories Relating to Usage

We would like to code the semantic functions to which a symbol may be put. The list that follows identifies 18 such functions and classes.

cessation	existence
recurrence	negation
reflection	"wh" question
action	initiation
state	redirection
agent	maintenance
instrumentation	termination
possession	object
location	feeling

Since this is a relatively recent addition to the fields under consideration, it lacks extensive study. We would appreciate your input.

Fields that Indicate the Topics to which a Symbol Can be Related

Categories relating to usage:

recreational/leisure
vocational
domestic life
independent living
money management
personal hygiene
family and personal
sexuality
community mobility
religion
health/medical care

school/education
emotions
environmental
sensory/mental/social
physical functions
other

We have also developed sub-categories and examples for some of these categories.

Initial Results (Unedited)

In the course of three months, 5,150 symbols were entered for the eight systems mentioned above. Because of time constraints, we used only four fields. Our first question was: What is the total vocabulary size of these eight systems combined, i.e. how many different words or phrases occur in the 5,150 on file. This resulted in a total of 2,703 different symbols which corresponds to the total expressive vocabulary of a six year old. We asked how many of the 2,703 symbols occurred in all eight systems. Since the smallest system entered contained 140 symbols (Core Picture Vocabulary), we expected to find a number less than 140 because some of the core symbols are unique and do not occur in any other system.

We were very surprised when the computer told us that there were only 14 symbols that occurred in every system. We were so surprised that we did not believe this and performed a manual count which netted 25 common symbols. A cause of the discrepancy between the manual and computer count is the ten percent error factor in the data that reside in the computer, error due to inconsistencies in the data entry conventions and spelling. Thus eight systems/symbol sets with vocabulary sizes ranging from 140 to 1400 symbols have only 25 symbols that occur in each and every one. This is still a baffling figure and one that we will share with system authors.

**This section of
Communicating Together
is sponsored by
Manufacturers Life
Insurance Company,
Toronto, Ontario.**

We then looked at uniqueness and asked how many symbols occur only in one system. The results are tabulated below, expressed first as the number of unique symbols and then as the percentage of unique to total vocabulary:

Bliss	562	40%	PIC	38	10%
PCS	96	14%	Picsym	271	33%
Oak	251	48%	P.Y.B.	20	6%
Core	29	20%	World	377	45%

Picture Your Blissymbols has the smallest percentage of unique symbols because this system overlaps almost entirely with Bliss. PCS and PIC have relatively few symbols that are unique, while in Oakland and Worldsign almost half of the total vocabulary consists of words that occur in no other system. It is tantalizing to have these figures and not yet be able to ask the next questions such as what are those differences. What can a user of Oakland Pictures communicate about, that someone using PCS or Blissymbols cannot say?

In order to answer these questions and many more, the base must be completed, the information must be entered in all fields and errors must be corrected. For this enterprise, we will again count on our BCI consultants. We hope to be able to keep you informed about the growth and development of Graphsys and look forward to comments and criticism. □

**Centre de Ressources
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and numbers)**

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Augmentative Communication



Communicating with Speaking-Disabled Students in Mainstream Educational Settings

by Linda Hill,
Richard Bennett
and Donna Pistell

Linda Hill is a graduate student at the University of Victoria, in British Columbia, who works and studies in the field of the psychology of communication disabilities. Richard Bennett is a speaking-disabled student with cerebral palsy who is working toward a degree in English Literature at the University of Victoria. He has informally educated a large number of people on campus about how to interact with speaking-disabled individuals. Donna Pistell is a speaking-disabled student with cerebral palsy who is presently majoring in History of Art at the University of Victoria. With the aid of an interpreter, she gives talks to community groups about attitudes towards handicapped people.

Increasingly, speaking-disabled students who have the academic ability are attending classes in mainstreamed educational settings. These include elementary school classrooms and high schools, as well as college and university programs. No matter what type of support services these students receive to help them in these settings, opportunities to interact with other students and with instructors are a key ingredient in integrating into the mainstream. This article, which is based on the personal experience of two of the authors, provides information and communication tips to help students and instructors learn the kinds of support they can offer when interacting with speaking disabled students in order that the speaking disabled may participate in the mainstream of school life fully, and with dignity.

General Information

Speaking-disabled individuals receive and understand verbal information in the same way that others do, and they have no problem formulating what they want to say. The difficulty is in telling their vocal apparatus what to do to send messages out. Some speaking-disabled people talk slowly and with difficulty, but can be understood. Others use augmentative or alternative communication systems to help them communicate.

There are a variety of methods to augment or replace spoken communication such as spelling, symbol and word boards, artificial speaking devices and portable typing communicators. These approaches all improve communication effectiveness, but another big factor contributing to the ease and efficiency of communication is what you, the communication partner, do in support. Conversing with a speaking-disabled person requires extensive participation from you to help the conversation flow as smoothly as possible.

One-to-one Communication

(1) *Speak normally.* Remember that although your communication partner has difficulty speaking, there is no comprehension difficulty. While you may have a tendency to try to improve communication by talking more slowly, more loudly or more simply, these adjustments are not necessary and in fact will interfere with the flow of conversation.

(2) *Relax.* In conventional communication, people are used to being able to understand without much effort. It is easy to become embarrassed, frustrated and impatient when communicating is not so easy. Your discomfort can interfere with your listening skills and the other person's communication skills by making both of you tense. Keep in mind that speaking-disabled people know they are difficult to understand. Try to stay relaxed as you watch and listen, and attempt to

get the "gist" of what is being said. Avoid trying to anticipate or guess at what the speaker is trying to say beyond more than one or two words. An incorrect prediction will set up a block in your own mind, making it harder for you to understand and frustrating for both of you.

(3) *Set aside extra time in a quiet place.* While most people talk at the rate of about 170 words per minute, conversing with speaking-disabled people is much slower. As you get used to the speaker's individual style of communicating, conversations will speed up considerably, but they will still be slow. Understanding will be enhanced in settings which have few distractions so that you can focus your full attention on what is being said. In addition, attend to all forms of communication. It is easy to be looking so closely at a communication board or listening so carefully to an individual's speech, that other aspects of communication are missed. In particular, pay attention to body language and facial expression.

(4) *Help with communication aids.* Check to see whether your communication partner needs assistance in setting up or using aids such as communication boards. The speaking-disabled person is responsible for providing clear, easily accessible instructions to help you know just what to do if this type of assistance is needed.

(5) *Let the speaking-disabled person know when you do not understand.* Before you get used to how the speaking-disabled person communicates, you will probably miss a great deal of what is being said. If you attempt to "fake it", it will become more embarrassing for both of you and the conversation will either stay at a superficial level or end quickly. There is no need to apologise. Simply tell the speaker that you did not understand so that the breakdown in communication can be repaired as quickly as possible.

sible. It is a good idea to repeat back the parts of the message that you did understand, so that the entire message does not need to be repeated again.

(6) *If you still do not understand, try some helping strategies.* Which helping strategies are effective is a highly individual matter, but sometimes it helps to ask the speaker to spell out the key words that you have missed letter by letter. Some people spell orally and some use a pointing or typing system. You may be able to predict the word after only a few letters have been spelled. At that point, you could say, "Do you mean...." If that is what was meant the speaker can stop spelling. If that is not what was meant, s/he can continue to spell out the word or words.

It also helps to find out or confirm what the topic of conversation is. Most communication breakdown occurs when the speaker is changing subjects, or introducing new, unexpected information. If this happens, you could ask him or her to spell out the new topic, or you could try to ascertain the topic by asking several "yes-no" questions *one at a time*. As in "Twenty Questions", be sure to start with general questions and progress to more specific ones.

(7) *After you ask a question, wait for an answer.* Speaking-disabled people may take longer to begin to answer questions than you are used to, leaving relatively long silent gaps between your questions and their responses. You may make the mistake of filling in these gaps by expanding on the first question or asking other completely different questions. This will lead to confusion, because the person you are talking to now has to respond to several questions at once, and when the response finally does start, no one will know which question is actually being answered. Instead, try to become used to the slower conversational pace, and give the listener plenty of time to respond to your questions.

(8) *Avoid doing all the talking.* Because your active participation is required and the pace is slow, there

is a danger that you will find it easier to take conversations over completely by doing all the talking. Give the disabled speaker as much opportunity as possible to initiate and contribute to conversations. However, if there are times when you cannot follow this advice, such as when you have a lot to tell the person and are in a hurry, he or she will understand.

Group Communication in Academic Settings

Because communicating in group settings such as meetings and classes takes up the time of everyone in the group, speaking-disabled people may not participate at all when in group situations. However, there are some ways for instructors and fellow students to help them communicate in a group without involving a great deal of extra time.

(1) *Group members who are experienced listeners can interpret.* In this approach, the speaking-disabled person makes a comment or asks a question while those who understand best translate what is being said for the benefit of the rest of the group. If the speaking-disabled individual limits him or herself to one or two remarks per group meeting, the time cost is very small. This strategy requires the encouragement and support of the instructor to be implemented successfully, but when it is used properly it can help break many communication barriers.

(2) *Spend time listening outside the meeting.* You might volunteer to spend some extra time before or after meetings and classes to listen to any comments or questions the speaking-disabled participant has. This way you can relay their comments to the rest of the group when it is appropriate.

(3) *Read out prepared messages.* The speaking-disabled person might want to spend time on his or her own preparing questions or comments that s/he would like to have asked during the last meeting. You might offer to read these out so that they can be answered at the beginning of the next class meeting. Oral

presentations can also be made by having a classmate read out material that has been previously prepared.

Group Communication in Social Settings

Speaking socially is usually much less of a strain for a speaking-disabled person than speaking in academic groups because the time factor is not as important. Also it is easier to have side-conversations with one or two people at a time. However, social situations have their own hazards.

(1) *Avoid talking "in front of".* Speaking-disabled people often joke that they would make great spies because of all the private conversations they over-hear people having in front of them. Even worse, they often hear themselves discussed as if they were not there. The experience has been described as being locked behind a window of one-way glass where it is possible to see out into the world, but the world cannot look in. This is isolating and frustrating.

(2) *Avoid talking "for".* Unless you have his or her specific permission, avoid answering for or making choices for the speaking-disabled person.

(3) *Include the speaking-disabled person in the conversation.* Group discussions flow swiftly, with many rapid subject changes. This may make it difficult for a speaking-disabled person to join in at the appropriate time. If you notice him or her getting ready to make a comment, you might help by taking time out to listen and to interpret what was said if necessary.

Course Work

Many speaking-disabled students have other disabilities that slow down communication through reading and writing as well as talking. Difficulties with getting access to books in the library, turning pages and coordinating the eyes can make reading a slow task. Limited dexterity can slow down writing or typing, making preparing essay

assignments or taking written examinations extremely time consuming.

One way that students themselves compensate for this is by taking fewer courses at a time. Other ways of compensating are to arrange for some special help (either paid or volunteer) and to adjust examinations. Students *do not want* easier assignments but some adjustments may be needed. Assignment modifications are individual matters that vary depending on the nature of the course, the preferences of the instructor and the speaking-disabled student's specific needs. However, the following general guidelines may help professors decide what types of adjustments might be appropriate. These guidelines can also help fellow students learn how to provide valuable assistance without taking too much of their time.

(1) *Assist with gathering reading material.* Although librarians are very helpful, classmates could offer to assist with using the library. If they know the speaking-disabled student's reading interests or research topics, they can provide this help informally by passing on any relevant materials that they come across while doing their own library research.

(2) *Assist with reading.* In the same way that blind students do, some students who read slowly listen to talking books or arrange for volunteer readers.

(3) *Assist with note-taking.* Especially in high school and post-secondary settings, a fellow student who takes well organized, legible notes could be asked to make copies of his or her notes available. The speaking-disabled student should be expected to either supply a note-book and carbon paper, or pay for photostating.

(4) *Adjust examinations.* Students usually prefer to take the same examinations as the rest of the class, but some adjustments may be needed. It is important to allow more time and to allow the student to select the most efficient communication method to complete the exam. Some students might prefer to use a special typewriter and per-

haps do an untimed take-home exam. Others might prefer to do an oral exam, using an experienced listener as an interpreter.

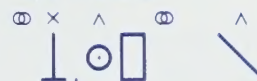
(5) *Adjust written assignments.* Although word processors should improve the situation somewhat, students with limited dexterity can take over 20 times longer to work on assignments than other students. Because of this, they often need extended deadlines to provide them with the time they need to complete assignments while maintaining quality.

Conclusion

The aim of this article is to help students and instructors learn how to provide appropriate communication support to mainstreamed speaking-disabled students. Hopefully you will follow some of these suggestions when you interact with speaking-disabled students. Perhaps these questions will help you to reach beyond a person's communication difficulties and come to know him or her as a friend. □

Special thanks is extended to Dr. Joel Newman, University of Victoria Counseling Centre for supervising the preparation and assisting with the editing of this article.

Readers Write



Dear Sir/Madam,

I am writing you in anticipation that you may be a suitable resource for a program I hope to establish.

As you may be aware, our Spastic Centre here in Woodville, South Australia uses the Bliss Communication System quite extensively. This is some of our clients' only formal communication technique and opens a new avenue for expression.

As Recreation Officer, I hope to set up a penpal letter exchange between Bliss users. We have a few teenagers here who, I believe, would thrive on this involvement. Would you be interested in helping to set up this program or could you please convey the idea to other organizations? Maybe a similar project is already underway. If so I would love to hear about it.

I look forward to a response in the near future.

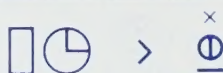
Yours sincerely,
Wendy Keeves, Recreation Officer,
Spastic Centres of South Australia, Inc.,
98 Woodville Road, P.O. Box 49,
Woodville, South Australia 5011.

For Your Information

The Blissymbol components used in section headings and design are shown here with accompanying words.

person	self	public	woman	man	family	life	month
(to) advance	(to) share	(to) teach	(to) learn	(to) read	(to) write	hello	goodbye
(to) communicate	science	knowledge	opinion	event	idea	(to) help, aid	Blissymbol
machine	computer	thing	schedule	paper, page	book	plural indicator	combine indicator
question	international	news	in, inside	country, state	(to) be	from	command

Schedule of Events



BCI Elementary Workshops

BCI Elementary Workshop training sessions are held throughout the year and provide professionals and families with an opportunity to learn about Blissymbolics. The workshops include 30 hours of lectures, and group and individual assignments.

Forthcoming Workshops:

In Ontario

- March 5-7, 1985 in Toronto with optional day March 8 presented by the Augmentative Communication Service.
- July 2-4, 1985 in Toronto with optional day July 5.
- October 8-10, 1985 in Toronto with optional day October 11.

Contact: Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario, Canada M4G 1R8. Telephone: (416) 424-3806

- April 3 to June 4, 1985 in Hamilton, one evening a week for 10 weeks.

Contact: Mrs. Shelley Deegan, 45 Peel Street, Dundas, Ontario, Canada L9H 3E8.

Telephone: (416) 627-5661

- April 3 to June 4, 1985 in Hamilton, a non-certificate course for general information and training to be held one evening a week for 10 weeks.

Contact: Mrs. Barbara Rush, 64 Magnolia Drive, Hamilton, Ontario, Canada L9C 5T2.

Telephone: (416) 385-4891

- May 18, 1985 in Hamilton, a one day seminar on Blissymbolics for Young Children (Preschool and Kindergarten).

Contact: Mrs. Shelly Deegan, 45 Peel Street, Dundas, Ontario, Canada L9H 3E8.

Telephone: (416) 627-5661

In Florida

- March 21-23, 1985 in Orlando at Valencia College.

Contact: Mrs. Sandra Osborne, 1600 Silver Star Road, Orlando, Florida. 32804 U.S.A.

Telephone: (305) 293-4379

- March 20, 1985 in Orlando, a one day seminar on Vocabulary Selection and Interaction Strategies given by Gail Tatenhove. Open to people who demonstrate background and involvement in some form of augmentative communication.

Contact: Mrs. Sandra Osborne, 1600 Silver Star Road, Orlando, Florida. 32804 U.S.A.

1984-85 Trace Center Workshop Schedule

Selection and Application of Microcomputers for Handicapped Individuals

In Maryland

- March 22-23, 1985 at United Cerebral Palsy of Montgomery Co. Inc., Rockville, Maryland, U.S.A.

Development of Communication and Interaction in Nonvocal Children and Adults

In Utah

- April 19-20, 1985 at Utah State University, Logan, Utah, U.S.A.

Content and Schedule Questions for All Workshops:

Workshop Coordinator, University of Wisconsin, Trace Research and Development Center, 314 Waisman Center, 1500 Highland Avenue, Madison, Wisconsin 53705, U.S.A. Telephone: (608) 262-6966

Meetings, Conferences and Fairs

Speech Tech-85

April 22-24, 1985

Vista International Hotel
New York World Trade Center
New York, New York

For information contact:

Media Dimensions, Inc., PO. Box 1121 Gracie Station, New York, New York. 10028 U.S.A.

Telephone: (212) 772-7068

Use of the Microcomputer with the Nonreading Communicatively Handicapped April 4 and 5, 1985

Omaha, Nebraska with a Computer Fair on April 3, 1985.

Sponsored by Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center.

For information contact:

Faith Carlson, Conference Coordinator, Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, 444 S. 44th Street, Omaha, Nebraska. 68131 U.S.A.

Telephone: (402) 559-6460

Technology and Nonspeaking Children April 12, 13, 1985 Philadelphia, Pennsylvania

For information contact:

The Children's Seashore House, 4100 Atlantic Avenue, PO. Box 4111, Atlantic City, New Jersey. 08404 U.S.A.

Telephone: (215) 596-9548

See What We Say: A Communication Fair April 13, 14, 1985

York Quay Centre
Harbourfront, Toronto, Ontario

Sponsored by the Communication Awareness and Action Group of Toronto.

A get together of nonspeaking people, their families and friends, manufacturers of communication devices and various community groups that help serve the non-speaking population. This fair is open to the public free of charge in hopes that public awareness will be increased concerning the needs and abilities of the nonspeaking population.

For information contact:

CAA, c/o 78 Glentworth Road, Willowdale, Ontario, Canada M2J 2E8.

Telephone: (416) 294-1212

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